



U.S. ENVIRONMENTAL PROTECTION AGENCY  
REGION 9  
CLEAN WATER ACT COMPLIANCE OFFICE

**NPDES Permittee:** Larry Morrison (unpermitted facility)

**Facility:** Morrison Brothers Dairy  
**Ex. 6 Personal Privacy (PP)**  
(Conditional Waiver of Waste Discharge Requirements Order R1-2012-0003)

**Receiving Water:** Laguna Creek, (Laguna de Santa Rosa watershed)

**Date of Inspection:** April 15, 2014; 8:30 a.m.

**Inspection Participants:**

U.S. EPA: Glenn Sakamoto, CWA Compliance Office, (415) 972 - 3556  
Becky Mitschele, NPDES Office, (415) 972 - 3492

California Regional Board: Cherie Blatt, North Coast Regional Water Quality Control Board  
(707) 576 – 2755

Western United Dairymen: Melissa Lema, Field Representative, (707) 779 – 2214

University of California: Deanne Meyers, .C. California Extension-Davis

Sonoma Resource  
Conservation District: Valerie Minton and Christine Kuehn

**Report Prepared By:** Becky Mitschele, US EPA Region 9

**Report Date:** May 12, 2014

## CAFO FACILITY INSPECTION REPORT

**ATTENDEES:** Glenn Sakamoto and Becky Mitschele (USEPA, Region 9), Cherie Blatt (Regional Water Quality Control Board 1, North Coast Region), Melissa Lema (Western United Dairymen), Deanne Meyers (University of California – Davis); Valerie Minton and Christine Kuehn (Sonoma Resource Conservation District)

**REPORT PREPARED BY:** Becky Mitschele, USEPA, Region 9

### FACILITY INFORMATION

<b>Inspection Date:</b>	April 15, 2014
<b>Facility Name:</b>	Morrison Brothers Dairy
<b>Facility Address:</b>	<div>Ex. 6 Personal Privacy (PP)</div>
<b>Authorized Official &amp; Phone:</b>	
<b>Mailing Address of Authorized Official:</b>	Same as facility address
<b>NPDES #:</b>	Unpermitted
<b>On-Site Representative:</b>	Larry Morrison, (925) 975 – 2986
<b>Receiving Water(s):</b>	Laguna Creek
<b>Inspector(s):</b>	Glenn Sakamoto, EPA Region 9 Cherie Blatt, North Coast Water Quality Control Board (NC RWQCB)

### BACKGROUND

The Morrison Brothers Dairy facility (“Site”) located at 

Ex. 6 Personal Privacy (PP)

 was part of the North Coast Water Quality Control Board (NC RWQCB) effort to complete inspections for all facilities seeking coverage under one of their permits (i.e. NPDES permit, Waste Discharge Requirement (WDR) state permit, or conditional waiver for a WDR permit). All dairy facilities in the North Coast must be covered by one of these permits or a waiver from the permit requirement. The North Coast Region contains approximately 150 dairies, housing about 50,000 cows. At the time of the inspection, the NC RWQCB had inspected over 100 dairies.

This round of inspections was the first time the state (and EPA) had visited these particular dairies, including the Morrison Brothers Dairy. The state was conducting these inspections to determine compliance with waiver requirements and to serve as a reminder to submit their groundwater well and surface water monitoring results. EPA was conducting its inspections to determine whether there are surface water concerns at the Site. While the size of the dairies in Marin and Sonoma are small compared to those in Chino and the Central Valley, they are often located on hills that slope toward creeks and streams. These waterbodies are vulnerable to manure runoff, especially during the rainy season.

The Site is not permitted to discharge pollutants under the Clean Water Act and is operating under a conditional waiver (Conditional Waiver No. R1-2012-003), which allows eligible facilities, including the Site, to operate without a discharge permit subject to certain conditions. The conditional waiver acts like a permit by establishing best management practices, monitoring and reporting requirements, and other requirements (herein referred to as “conditional waiver” or “conditional waiver of WDR”). The conditional waiver is available to any size operation that poses a low or insignificant risk to surface or groundwater. The NC RWQCB issued the conditional waiver on January 19, 2012, which expires January 19, 2017.

## INSPECTION OBSERVATIONS

On April 15, 2014, Glenn Sakamoto (US EPA Inspector) and Cherie Blatt (North Coast Regional Water Quality Control Board Inspector) conducted a joint federal/state compliance evaluation inspection of the Morrison Dairy facility to determine compliance with federal and state requirements. Becky Mitschele (US EPA Permitting Specialist), Melissa Lema (Western United Dairymen), Valerie Minton and Christine Kuehn (Sonoma Reserve Conservation District), and Deanne Meyers (UC – Davis) were also in attendance. The inspectors arrived at the Site announced and contacted Mr. Morrison to begin the inspection. Mr. Morrison arrived promptly and granted access to the Site. Mr. Morrison was present throughout the inspection, from the opening conference until the end of the exit interview. Weather at the time of the inspection was 70°F and cloudy.

At the opening conference, Glenn and Cherie asked to inspect the following areas of the Site: the confinement areas, including the stabling area, stormwater conveyances, manure storage and handling areas, the perimeter of the Site, and any surface waters either adjacent to, or that might receive flows from, the Site.

We visited the nearest surface waters, Bellevue Wilfred Channel and Laguna de Santa Rosa. The Bellevue Wilfred Channel flows into the Laguna de Santa Rosa. The Laguna de Santa Rosa is immediately adjacent to the southern part of the facility's production area, including the manure ponds and a dirt area where solids are dried. (Photos 1 to 26).

The current 2010 Clean Water Act Section 303(d) List of Impaired Waterbodies includes Laguna de Santa Rosa. The river is divided into stream segments and is impaired for nutrients, sediment, dissolved oxygen and temperature in the area where the site is located. A nutrient TMDL is being developed this year, and ammonia and dissolved oxygen TMDLs were adopted in 1995.

The Site is an approximately 410-acre organic farm with grazing fields and a production area. The Site has 2 manure ponds and land application fields for rye grass, oats, and pasture mix. The inspectors observed weed growth on the berms of all manure ponds.

According to Mr. Morrison the original farm dates back to 1965, and he purchased the Site in 1981. Mr. Morrison reported, at the time of the inspection, 500 current milking and dry cows and 400 other cows. EPA regulations defines dairy facilities as Large Concentrated Animal Feeding Operations (Large CAFOs) if there are greater than 700 mature dairy cows (40 CFR Part 122.23(b)(2)). The Site does not have a nutrient management plan even though the conditional waiver requires dairies with greater than 700 cows to have a nutrient management plan.

The NC RWQCB has no general permit available for dairies facilities; each such facility that discharges would be required to apply for individual permit coverage. There is a conditional waiver from state permit coverage available from the NC RWQCB. The conditional waiver of WDR permit is a general permit applicable to existing dairy operations that have not expanded (as of 1/19/12). RB 1 requires new or expanding dairies to apply for an individual WDR or individual waiver of WDR permit (as opposed to seeking coverage under the general permit).

The conditional waiver of WDR permit prohibits discharges to surface water and groundwater, requires specific production and land application best management practices, and establishes record keeping and monitoring requirements. Specifically, the waiver permit prohibits:

- Direct discharges to groundwater;
- Discharges of manure and process wastewater to surface water or groundwater;

- Discharges from the production area of stormwater that has come into contact with manure or process wastewater;
- Discharges to surface waters via tile drain lines or irrigation return flows (i.e. tailwater), including irrigation water that comes into contact with process wastewater or manure;
- Discharges from the land application that do not comply with the requirements in the water quality plan (or nutrient management plan for Large CAFOs) and the monitoring and reporting plan;
- Disposal of mortalities in liquid manure or process wastewater systems; and
- Animal access (i.e. direct contact) to surface water within production area.

According to Mr. Morrison, the facility has not discharged. The surface area of the production is mostly bare dirt, except for paved access roads and the chemical storage area. Most buildings have stormwater gutters that feed into pipes that direct the runoff to land application fields. The inspectors observed a few building that lacked gutters. Additional runoff from the production area also flows into these pipes to land application fields.

The facility uses a footbath before the cows enter the milking parlor. The parlor is flushed and scraped, with the process wastewater being contained in the manure pond. Each of the manure ponds are cleaned annually (by October). The ponds do not have depth markers and had medium to heavy vegetation growing on pond banks. (Photos 1 to 26). The Site transfers approximately 75% of the manure offsite, however, each field receives at least one application of manure/process wastewater every year. The facility maintains a manifest as required by the waiver. The solids are dried in compost rows and are covered.

## **AREAS OF CONCERN**

### **Potential for Unauthorized Discharges:**

Because this Site does not have an NPDES permit, discharges from the Site to Waters of the United States are prohibited. The State of California regulates discharges to all “waters of the state,” which include both surface waters and groundwater (Porter-Cologne Water Quality Control Act § 13050). Per 27 CCR § 13264(a), no person shall initiate any new discharge of waste to waters of the state prior to issuance of waste discharge requirements or a waiver of such requirements. Part 24 and 25, Prohibitions, of the conditional waiver the Site has been operating under, prohibits the discharge of manure, litter, and process wastewater, or stormwater that has come into contact with manure, litter, and process wastewater. Therefore, the operator must ensure that no discharges to Waters of the United States occur without authorization by the permitting authority.

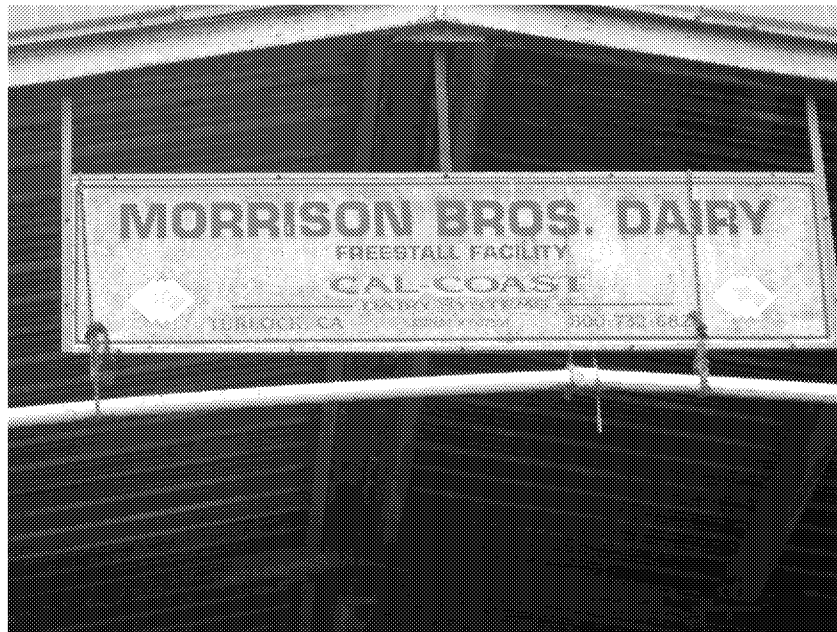
Some of the buildings do not have stormwater gutters and at some places both onsite and offsite, polluted waters may come into contact with soils (unpaved areas) and may soak into the groundwater. Gutter collect clean stormwater and direct water away from manured areas. Redirecting clean stormwater is one way to preserve manure capacity during heavy storm events.

Part of the production area, around and including ponds 3 and 4, is located within the 100-year floodplain of the Laguna de Santa Rosa. (See attached FEMA map). The south edge of the production area is approximately 150 feet from the Laguna de Santa Rosa. Due to this proximity, EPA (and the Board) recommends that that all manured areas are on concrete or compacted soil and do not drain to surface waters or groundwater.

**Terms of the Conditional Waiver (Order No. R1-2012-0003):**

While the facility is permitted with a capacity over 700 cows, the facility is operating with approximately 670 cows. The facility should develop a nutrient management plan in addition to the water quality plan.

**Photos and Maps:** Photos and maps shared by Cherie Blatt, Regional North Coast Water Quality Control Board (4/15/2014)



1. Morrison Bros. Dairy Sign

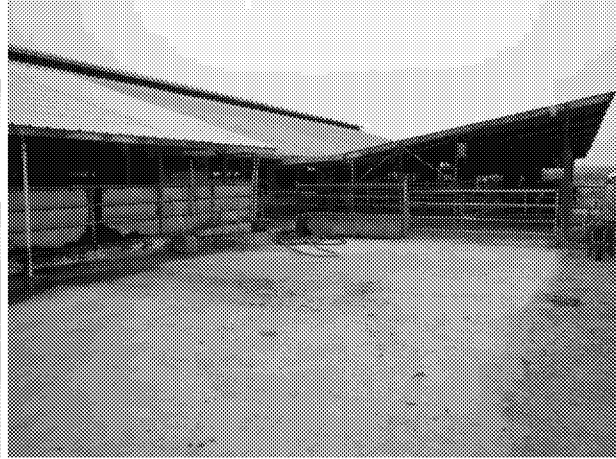


2. Domestic Well (left) and Milk Barn (right).

3. Feed Storage.



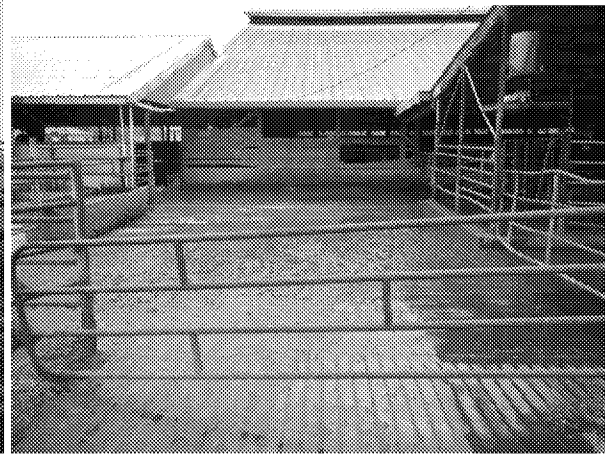
4. Domestic Well.



5. Production Area.



6. Scraped lanes. Note concrete floor and curbs.



7. Scraped lanes on concrete. Note roof rain gutter on Freestall Barn at center.



8. South Freestall Barn (left) and calf hutches (right).



9. Corral and manure scrapings.



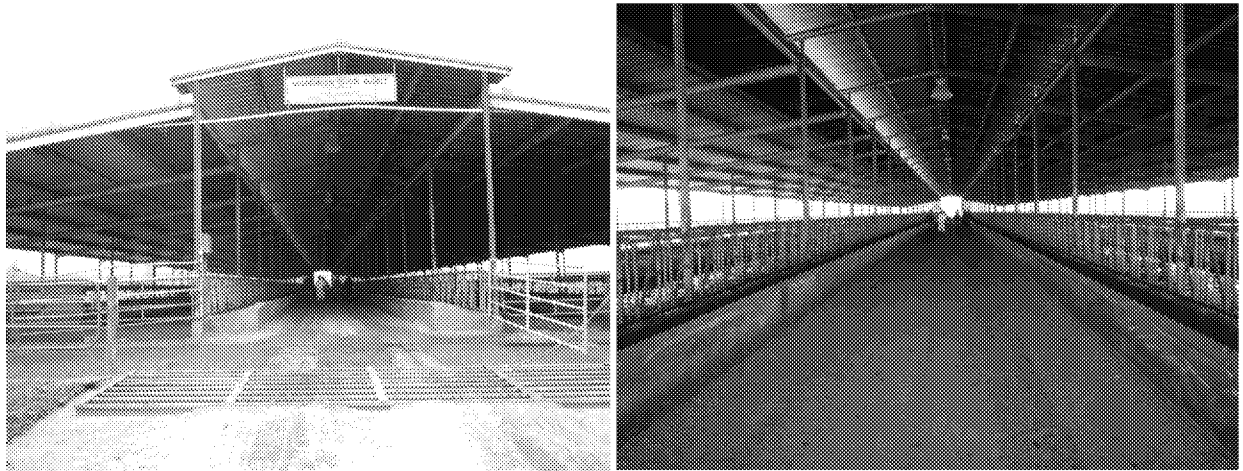
10. Concrete lanes near sump. Note rain gutter and downspout on west end of Freestall Barn



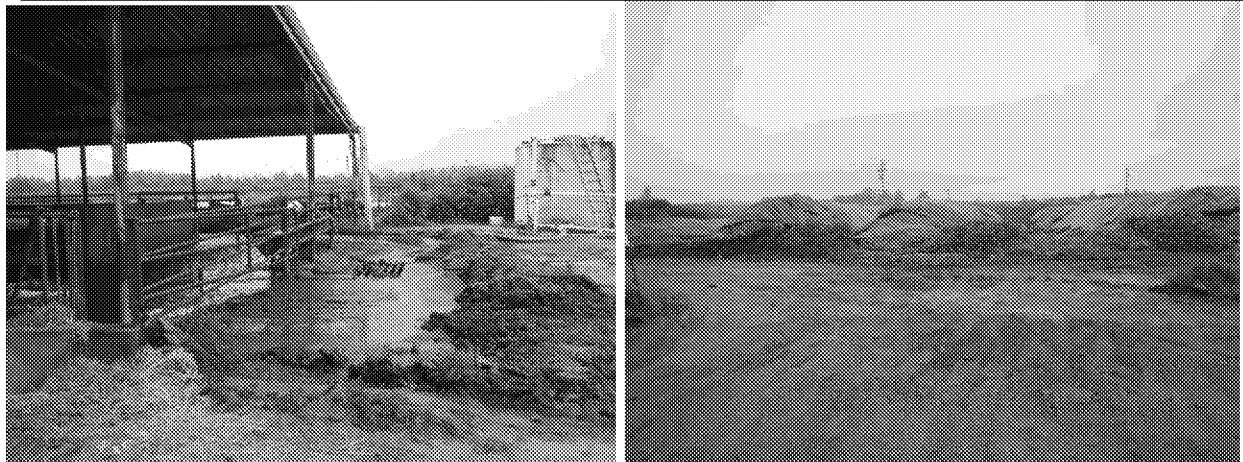
11. Fuel storage in concrete retaining walls.

12. North Freestall Barn.





13 and 14. North Freestall Barn with scraped, concrete lanes and curbs.



15. Scraped lanes/liquids, drain to manure ponds. Note roof rain gutter and downspout on North Freestall Barn.

16. Manure composting.



17. Liquid Manure Sump near Freestall Barn.



18. Manure Pond 1.

19. Dry Manure Storage.



20. Liquid Manure Pond 2 with agitator.

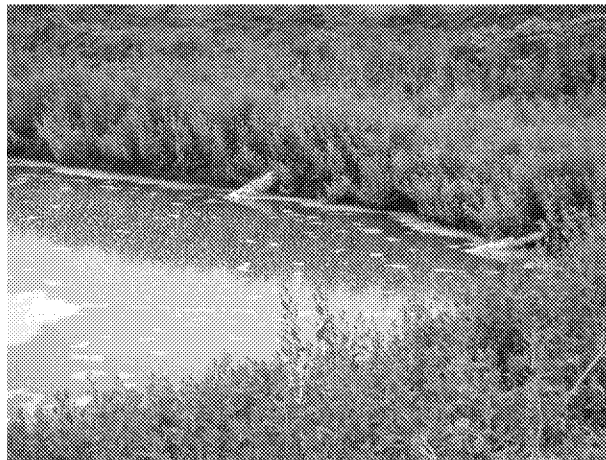
21. Vegetation along Laguna de Santa Rosa (left)  
and manure pond berm (right)



22. Liquid Manure Pond 3.



23. Liquid Manure Pond 3 with agitator.



24. Liquid Manure Pond 3. Note drainage pipe from Liquid Manure Pond 4.



25. Manure Liquids Pond 3 (left) accepts overflow from Manure Liquids Pond 4 (right). Note weed growth around ponds.



26. Irrigation Gun in pasture North of production area.

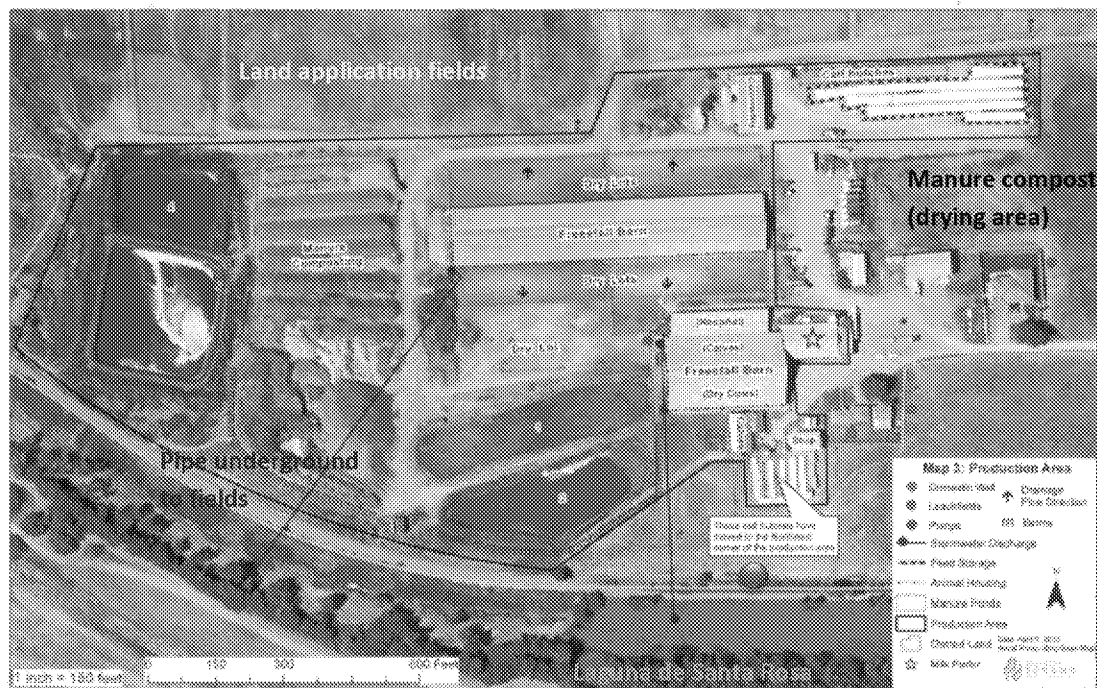


Figure 1. Google Earth Image of Morrison Brothers Dairy - Map from North Coast Regional Water Quality Control Board: Water is collected from the production area and either directed to the manure ponds or to land application fields via collection pipes. Pond 1 collects flush water from the milking parlor as well as solids and is gravity-fed to pond 2. Pond 3 is an overflow pond for pond 2.



Figure 2. Map of land application areas showing direction of water flow. Note water flow direction to Laguna Creek (left owned land acres).



Figure 3. FEMA map of 100-year flood areas.